

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1)-33) (Canceled)

34)-52) (Canceled)

53) (Currently amended) A process for cleaning or disinfecting surfaces exposed to light, comprising the step of depositing a film of titanium dioxide on said surfaces with a film-forming dispersion comprising a continuous phase, said titanium dioxide being in the form of elementary particles whose size is less than 100 nm, and whose specific surface area is greater than 150 m²/g, the continuous phase of said dispersion comprising water or at least one alcohol whose boiling point is less than 120°C, and said dispersion having, when it comprises water, a pH different by at least 1 unit, from the value of the isoelectric point of titanium dioxide in said dispersion, said dispersion further comprising at least one film-forming organic or organosiloxane polymer interacting with the surface of the titanium dioxide particles by electrostatic bonding and according to claim 52) wherein the polymer is selected from the group consisting of:

- a sulfonated terephthalic oligoester or copolyester,
- a polyoxyalkylenated polymer which carries anionic functions,
- a cationic polymer additionally exhibiting bacteriostatic properties,

- a cationic homopolymer or copolymer derived from at least one cationic monomer comprising an ethylenic unsaturation, optionally in a mixture with at least one nonionic monomer, and
- an amphoteric copolymer derived from at least one cationic monomer comprising an ethylenic unsaturation, and at least one anionic monomer comprising an ethylenic unsaturation, optionally in a mixture with at least one nonionic monomer.

54) (Currently amended) A process according to claim 53 ~~52~~), wherein the film-forming polymer is selected from the group consisting of:

- copolymers of acrylic acid or methacrylic acid and polyethylene glycol acrylate or methacrylate having a polyoxyethylene mass of from 500 to 10 000,
- quaternary ammonium ionenes,
- cationic polymers derived from epichlorohydrin and dimethylamine, and
- cationic polymers derived from epichlorohydrin and imidazole

55) (Previously presented) A process according to claim 53) wherein the cationic monomer comprising an ethylenic unsaturation is selected from the group consisting of:

- aminoacryloyl or -acryloyloxy monomers,
- N,N-dialkyldiallylamine monomers
- polyquaternary monomers.

56) (Previously presented) A process according to claim 55) wherein the cationic monomer comprising an ethylenic unsaturation is selected from the group consisting of:

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AMENDMENT

trimethylaminopropyl methacrylate chloride, trimethylaminoethylacrylamide or trimethylaminomethacrylamide chloride or bromide, trimethylaminobutylacrylamide or trimethylaminobutylmethacrylamide methyl sulfate, trimethylaminopropyl-methacrylamide methyl sulfate (MES), (3-methacrylamidopropyl)trimethylammonium chloride (MAPTAC), (3-acrylamidopropyl)trimethylammonium chloride (APTAC), methacryloyloxyethyl trimethylammonium chloride or methyl sulfate, acryloyloxyethyltrimethylammonium chloride, 1-ethyl-2-vinylpyridinium bromide, 1-ethyl-2-vinylpyridinium chloride, 1-ethyl-2-vinylpyridinium bromide methyl sulfate, N,N-dimethyldiallylammonium chloride (DADMAC), dimethylaminopropylmethacrylamide chloride, and N-(3-chloro-2-hydroxypropyl)trimethylammonium (DIQUAT)

57) (Previously presented) A process according to claim 53) wherein the anionic monomer comprising an ethylenic unsaturation is selected from the group consisting of:

- acrylic, methacrylic, fumaric, maleic, itaconic, N-methacroylalanine, or N-acryloylhydroxyglycine acids or anhydrides, or their water-soluble salts, and
- water-soluble sulfonated or phosphonated ethylenically unsaturated monomers.

58) (Previously presented) A process according to claim 57) wherein the anionic monomer comprising an ethylenic unsaturation is selected from the group consisting of:

sulfopropyl acrylate, its water-soluble salts, water-soluble styrenesulfonates, vinylsulfonic acid, its water-soluble salts, vinylphosphonic acid, and its water-soluble salts.

59) (Previously presented) A process according to claim 53) wherein the nonionic monomer is selected from the group consisting of acrylamide, N-isopropylacrylamide, N,N-dimethylacrylamide, dimethylaminoethylmethacrylate (DMAEMA), dimethylaminopropylmethacrylamide, vinyl alcohols, alkyl acrylates or methacrylates, hydroxyalkyl acrylates or methacrylates, and polyoxyalkylene glycol acrylates or methacrylates.

60) (Currently amended) The ~~use~~ process as claimed in claim 53) wherein the cationic or amphoteric polymer derived from at least one cationic monomer comprising an ethylenic unsaturation is selected from the group consisting of:

- a DIQUAT homopolymer;
- a DADMAC homopolymer;
- a MAPTAC/acrylic or methacrylic acid; a DIQUAT/acrylic or methacrylic acid; a DADMAC/acrylic or methacrylic acid copolymer;
- a MES/acrylic or methacrylic acid/DMAEMA copolymer;
- a MAPTAC/acrylic acid/acrylamide; a MAPTAC/maleic anhydride/acrylamide; a MAPTAC/vinylsulfonic acid/acrylamide copolymer;
- a DADMAC/acrylic acid/acrylamide; a DADMAC/maleic anhydride/acrylamide; a DADMAC/vinylsulfonic acid/acrylamide copolymer;

- a DIQUAT/acrylic acid/acrylamide; a DIQUAT/maleic anhydride/acrylamide; and
a DIQUAT/vinylsulfonic acid/acrylamide copolymer;
copolymers having a ratio of the total number of anionic charges to the total number of
cationic charges of from 95/5 to 5/95,

61) (Previously presented) A process according to claim 60) wherein
the ratio is from 90/10 to 10/90.

62) (Previously presented) A process according to claim 53) wherein
the dispersion comprises from 0.01 to 2% by weight of the film-forming polymer
interacting with the surface of the titanium dioxide particles by electrostatic bonding.

63) (Currently amended) A process according to claim ~~53~~ 52),
wherein the dispersion comprises water and has a pH of from 4 to 9.

64)-77) (Canceled)

78) (Currently amended) A film-forming dispersion ~~according to~~
~~claim 77)~~ comprising:

- from 0.01 to 15% of its weight of titanium dioxide in the form of elementary
particles whose size is less than 100 nm, and whose specific surface area is greater
than 150 m²/g,
- from 0.005 to 15% of its weight of at least one film-forming polyalkoxylated
organosiloxane or organic polymer, and
- a continuous phase of said dispersion comprising water or at least one alcohol whose
boiling point is less than 120°C, and having, when it comprises water, a pH different
by at least 1 unit, from the value of the isoelectric point of titanium dioxide in said
dispersion, and the film-forming polymer interacts with the surface of the titanium

dioxide particles by electrostatic bonding and ~~wherein the polymer~~ is selected from the group consisting of:

- a sulfonated terephthalic oligoester or copolyester,
- a polyoxyalkylenated polymer which carries anionic functions,
- a cationic polymer additionally exhibiting bacteriostatic properties,
- a cationic homopolymer or copolymer derived from at least one cationic monomer comprising an ethylenic unsaturation, optionally in a mixture with at least one nonionic monomer, and
- an amphoteric copolymer derived from at least one cationic monomer comprising an ethylenic unsaturation, and at least one anionic monomer comprising an ethylenic unsaturation, optionally in a mixture with at least one nonionic monomer.

79) (Currently amended) A film-forming dispersion according to claim 78 ~~77~~) wherein the film-forming polymer is selected from the group consisting of:

- copolymers of acrylic acid or methacrylic acid and polyethylene glycol acrylate or methacrylate having a polyoxyethylene mass of from 500 to 10 000,
- quaternary ammonium ionenes,
- cationic polymers derived from epichlorohydrin and dimethylamine, and
- cationic polymers derived from epichlorohydrin and imidazole

80) (Previously presented) A film-forming dispersion according to claim 78) wherein the cationic monomer comprising an ethylenic unsaturation is selected from the group consisting of:

- aminoacryloyl or -acryloyloxy monomers,

- N,N-dialkyldiallylamine monomers
- polyquaternary monomers.

81) (Previously presented) A film-forming dispersion according to claim 80) wherein the cationic monomer comprising an ethylenic unsaturation is selected from the group consisting of:

trimethylaminopropyl methacrylate chloride, trimethylaminoethylacrylamide or trimethylaminomethacrylamide chloride or bromide, trimethylaminobutylacrylamide or trimethylaminobutylmethacrylamide methyl sulfate, trimethylaminopropyl-methacrylamide methyl sulfate (MES), (3-methacrylamidopropyl)trimethylammonium chloride (MAPTAC), (3-acrylamidopropyl)trimethylammonium chloride (APTAC), methacryloyloxyethyl trimethylammonium chloride or methyl sulfate, acryloyloxyethyltrimethylammonium chloride,

1-ethyl-2-vinylpyridinium bromide, 1-ethyl-2-vinylpyridinium chloride, 1-ethyl-2-vinylpyridinium bromide methyl sulfate,

N,N-dimethyldiallylammonium chloride (DADMAC),

dimethylaminopropylmethacrylamide chloride, and

N-(3-chloro-2-hydroxypropyl)trimethylammonium (DIQUAT)

82) (Previously presented) A film-forming dispersion according to claim 78) wherein the anionic monomer comprising an ethylenic unsaturation is selected from the group consisting of:

- acrylic, methacrylic, fumaric, maleic, itaconic, N-methacroylalanine, or N-acryloylhydroxyglycine acids or anhydrides, or their water-soluble salts, and
- water-soluble sulfonated or phosphonated ethylenically unsaturated monomers.

83) (Previously presented) A film-forming dispersion according to claim 82) wherein the anionic monomer comprising an ethylenic unsaturation is selected from the group consisting of:
sulfopropyl acrylate, its water-soluble salts, water-soluble styrenesulfonates, vinylsulfonic acid, its water-soluble salts, vinylphosphonic acid, and its water-soluble salts.

84) (Previously presented) A film-forming dispersion according to claim 78) wherein the nonionic monomer is selected from the group consisting of acrylamide, N-isopropylacrylamide, N,N-dimethylacrylamide, dimethylaminoethylmethacrylate (DMAEMA), dimethylaminopropylmethacrylamide, vinyl alcohols, alkyl acrylates or methacrylates, hydroxyalkyl acrylates or methacrylates, and polyoxyalkylene glycol acrylates or methacrylates.

85) (Previously presented) A film-forming dispersion according to claim 78) wherein the cationic or amphoteric polymer derived from at least one cationic monomer comprising an ethylenic unsaturation is selected from the group consisting of:

- a DIQUAT homopolymer;
- a DADMAC homopolymer;
- a MAPTAC/acrylic or methacrylic acid; a DIQUAT/acrylic or methacrylic acid; a DADMAC/acrylic or methacrylic acid copolymer;
- a MES/acrylic or methacrylic acid/DMAEMA copolymer;
- a MAPTAC/acrylic acid/acrylamide; a MAPTAC/maleic anhydride/acrylamide; a MAPTAC/vinylsulfonic acid/acrylamide copolymer;

- a DADMAC/acrylic acid/acrylamide; a DADMAC/maleic anhydride/acrylamide; a DADMAC/vinylsulfonic acid/acrylamide copolymer;

- a DIQUAT/acrylic acid/acrylamide; a DIQUAT/maleic anhydride/acrylamide; and a DIQUAT/vinylsulfonic acid/acrylamide copolymer;

copolymers having a ratio of the total number of anionic charges to the total number of cationic charges of from 95/5 to 5/95,

86) (Previously presented) A film-forming dispersion according to claim 85) wherein the ratio is from 90/10 to 10/90.

87) (Previously presented) A film-forming dispersion according to claim 78), wherein the dispersion comprises from 0.01 to 2% by weight of the film-forming polymer interacting with the surface of the titanium dioxide particles by electrostatic bonding.

88) (Currently amended) A film-forming dispersion according to claim ~~78~~ 77), wherein the dispersion comprises water and has a pH of from 4 to 9.